

**TEST NAME: Benchmark Review Math 8, 2**  
**TEST ID: 828136**  
**GRADE: 08 - Eighth Grade**  
**SUBJECT: Mathematics**  
**TEST CATEGORY: My Classroom**

Student: \_\_\_\_\_

Class: \_\_\_\_\_

Date: \_\_\_\_\_

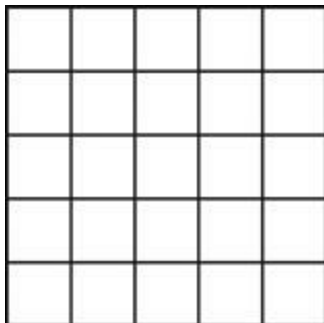
1. What is the value of the expression  $(2^3)(4^3)(2^{-4})$ ?

- A. 32
- B. 48
- C. 64
- D. 128

2. Which is equivalent to  $\frac{10 \times 10^4 \times 10^3}{10^9}$ ?

- A.  $10^{-2}$
- B.  $10^{-1}$
- C.  $10^3$
- D.  $10^4$

3. Which value represents the square root of the number of squares in the array below?



- A. 5
- B. 9
- C. 20
- D. 25

4. Which expression could represent the value of  $x$  in the equation below?

$$x^3 = 2$$

A.  $\frac{2}{3}$

B.  $2^3$

C.  $\sqrt[3]{2}$

D.  $2 \cdot 3$

5. Mercury is about  $3.6 \times 10^7$  miles from the Sun. Venus is about  $6.7 \times 10^7$  miles from the Sun. **About** how many times farther is Venus from the Sun than Mercury?

A. 1.5

B. 2

C. 2.5

D. 3

6. The number of fish in Lake Bass is about  $1.2 \times 10^6$ . The number of fish in Lake Simon is about  $6 \times 10^3$ . How much larger is the number of fish in Lake Bass than the number of fish in Lake Simon?

A. 2 times larger

B. 20 times larger

C. 200 times larger

7. The Sun's mass is about 333,000 times the Earth's mass. What is 333,000 expressed in scientific notation?

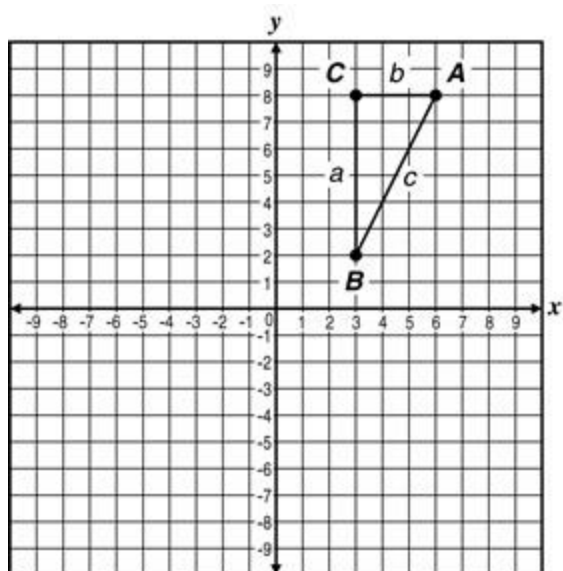
A.  $333 \times 10^3$

B.  $33.3 \times 10^4$

C.  $3.33 \times 10^5$

D.  $3.33 \times 10^6$

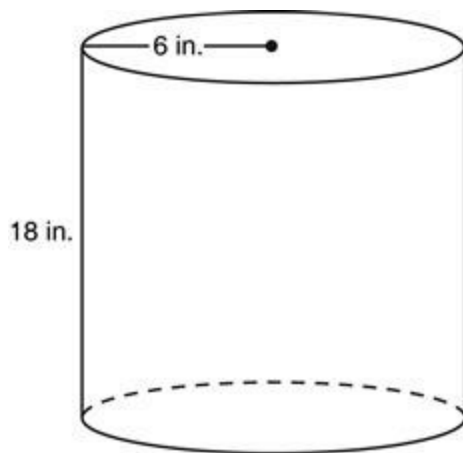
8. Which is equivalent to  $(7 \times 10^{-2})(0.03)$ ?
- A.  $2.1 \times 10^{-4}$   
 B.  $2.1 \times 10^{-3}$   
 C.  $2.1 \times 10^3$   
 D.  $2.1 \times 10^4$
9. If the two legs of a right triangle measure 5 inches and 9 inches, what is the length of the hypotenuse?
- A. 7 inches  
 B.  $\sqrt{106}$  inches  
 C.  $\sqrt{196}$  inches  
 D. 106 inches
10. Triangle  $ABC$  has vertices located at  $A(6, 8)$ ,  $B(3, 2)$ , and  $C(3, 8)$  on the coordinate grid.



Which equation could be used to show that  $a^2 + b^2 = c^2$ ?

- A.  $(8 - 2)^2 + (6 - 3)^2 = \left(\sqrt{(8 - 2)^2 + (6 - 3)^2}\right)^2$   
 B.  $(8 - 2)^2 + (6 - 3)^2 = \sqrt{(8 - 2)^2 + (6 - 3)^2}$   
 C.  $(8 - 2) + (6 - 3) = \left(\sqrt{(8 - 2)^2 + (6 - 3)^2}\right)^2$   
 D.  $(8 - 2) + (6 - 3) = \sqrt{(8 - 2)^2 + (6 - 3)^2}$

11. Which expression represents the volume of the cylinder in cubic inches?



- A.  $6 \times 18 \times \pi$   
B.  $\pi \times 6^2 \times 18$   
C.  $6 \times 18^2 \times \pi$   
D.  $2\pi \times 6 \times 18$
12. A company makes a cone-shaped container with a height of 15 in. The area of its base is about  $78.8 \text{ in.}^2$ . **Approximately** what is the volume of the container?
- A.  $3,546 \text{ in.}^3$   
B.  $1,182 \text{ in.}^3$   
C.  $394 \text{ in.}^3$   
D.  $94 \text{ in.}^3$
13. Which fraction is equivalent to  $0.\overline{45}$  ?
- A.  $\frac{9}{20}$   
B.  $\frac{5}{11}$   
C.  $\frac{4}{9}$   
D.  $\frac{4}{5}$

14. Which number in the list is an irrational number?

$$\frac{9}{4}, -13^3, \sqrt{15}, 1.52$$

- A. 1.52
- B.  $-13^3$
- C.  $\frac{9}{4}$
- D.  $\sqrt{15}$

15. Which set contains all irrational numbers?

A.  $\sqrt{3}, \pi, 4\sqrt{5}$

B.  $\frac{5}{9}, \sqrt{3}, 0.\overline{3}$

C.  $0, \frac{3}{4}, 1.914$

D.  $\sqrt{\frac{1}{2}}, 2\sqrt{5}, \sqrt{25}$